

## REMARKS

A review of the claims indicates that:

- A) Claims 1 and 17 are currently amended.
- B) Claims 2—8, 10—16 and 18—20 are original.
- C) Claims 21—54 are withdrawn.
- D) Claim 9 is cancelled.

In view of the following remarks, Applicant respectfully requests reconsideration of the rejected claims and withdrawal of the rejections.

### Traversal of the §103 Rejections

Claims 1—20 were rejected under §102(b) as being anticipated by, or alternatively under §103(a) as being unpatentable over, U.S. Patent No. 5,354,420, hereinafter “Russell.” In response, the Applicant respectfully traverses the rejection.

**Claim 1** recites an apparatus for micromachining a substrate comprising:

- an open air region within which substrates can be processed;
- a laser source operably positioned relative to the open air region to generate a laser beam configured to energize substrate material of a substrate positioned within the open air region; and
- a gas supply that supplies a halogen containing assist gas into the open air region wherein at least some substrate material can be energized by the laser beam and wherein at least some of the energized substrate material can chemically react with the assist gas to form one or more compounds that dissipate into the open air region, **and wherein the halogen containing assist gas comprises a halosulfide.**

1       The Applicant has amended Claim 1 to additionally recite the elements of  
2 Claim 9. Accordingly, Claim 1 assumes the exact scope of original Claim 9, and  
3 the Applicant will address the rejection of Claim 9. In this case, both Claims 1  
4 and 9 were rejected under a unified Section 102/103 rejection using the Russell  
5 reference.

6       Claim 1, as amended, recites, “wherein the halogen containing assist gas  
7 comprises a halosulfide”. The Applicant respectfully submits that Russell does  
8 not teach or suggest the use of an assist gas comprising halosulfide.

9       Referring to Russell, at column 17 Russell recites “semiconductor  
10 compounds cadmium sulfide...” (column 17, lines 67—68). Accordingly, Russell  
11 teaches that the substrate, that is the semiconductor that is being etched, can  
12 contain a sulfide compound. However, Russell does not teach or suggest *an assist*  
13 *gas having a sulfur component.*

14       Moreover, additional search of the Russell reference indicates that sulfur  
15 containing compounds are taught only with regard to substrates, and not with  
16 regard to assist gases.

17       The Patent Office points to the bottom of column 17, and suggests that  
18 Russell teaches or suggests the use of a halosulfide assist gas. However, the  
19 Applicant submits that Russell actually teaches that the substrate comprise sulfur,  
20 not the assist gas, as recited in the claim.

21       Accordingly, the Applicant respectfully submits that elements in Claim 1,  
22 as amended, are not taught or suggested by Russell, and requests that Claim 1,  
23 amended to recite the scope of original Claim 9, be allowed to issue.  
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1       **Claims 2—8 and 10—16** depend from Claim 1 and are allowable due to  
2 their dependence from an allowable base claim. These claims are also allowable  
3 for their own recited features that, in combination with those recited in Claim 1,  
4 are neither disclosed nor suggested in references of record, either singly or in  
5 combination with one another. Accordingly, the Applicant respectfully requests  
6 that the Section 102 rejection of these claims be removed.

7  
8       **Claim 17** has been amended to recite elements recited by current Claim 1.  
9 Accordingly, the Applicant respectfully submits that Claim 17 is allowable for at  
10 least the reasons that Claim 1 is allowable, and incorporates the remarks above at  
11 this location.

12  
13       **Claims 18—20** depend from Claim 17 and are allowable due to their  
14 dependence from an allowable base claim. These claims are also allowable for  
15 their own recited features that, in combination with those recited in Claim 17, are  
16 neither disclosed nor suggested in references of record, either singly or in  
17 combination with one another. Accordingly, the Applicant respectfully requests  
18 that the Section 102/103 rejection of these claims be removed.

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20       **Conclusion**

21       The Applicant submits that all of the claims are in condition for allowance  
22 and respectfully requests that a Notice of Allowability be issued. If the Office's  
23 next anticipated action is not the issuance of a Notice of Allowability, the  
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1 Applicant respectfully requests that the undersigned attorney be contacted for the  
2 purpose of scheduling an interview.

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4 Respectfully Submitted,

5  
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